

Appendix C

Correlated PM₁₀ Concentrations and Winds

The following graphs illustrate the direct correlation between wind speeds¹ and PM₁₀ concentrations at select monitoring sites within the Salton Sea Air Basin on April 24, 2016 and April 25, 2016. Note that wind speed measurements may be taken at any time during the hour. Therefore, the following graphs may reflect only the hour in which wind measurements were taken, and not necessarily the exact time.

IMPERIAL COUNTY SITES (Figures C-1 to C-5)

FIGURE C-1
BRAWLEY
PM₁₀ CONCENTRATION & WIND SPEED CORRELATION

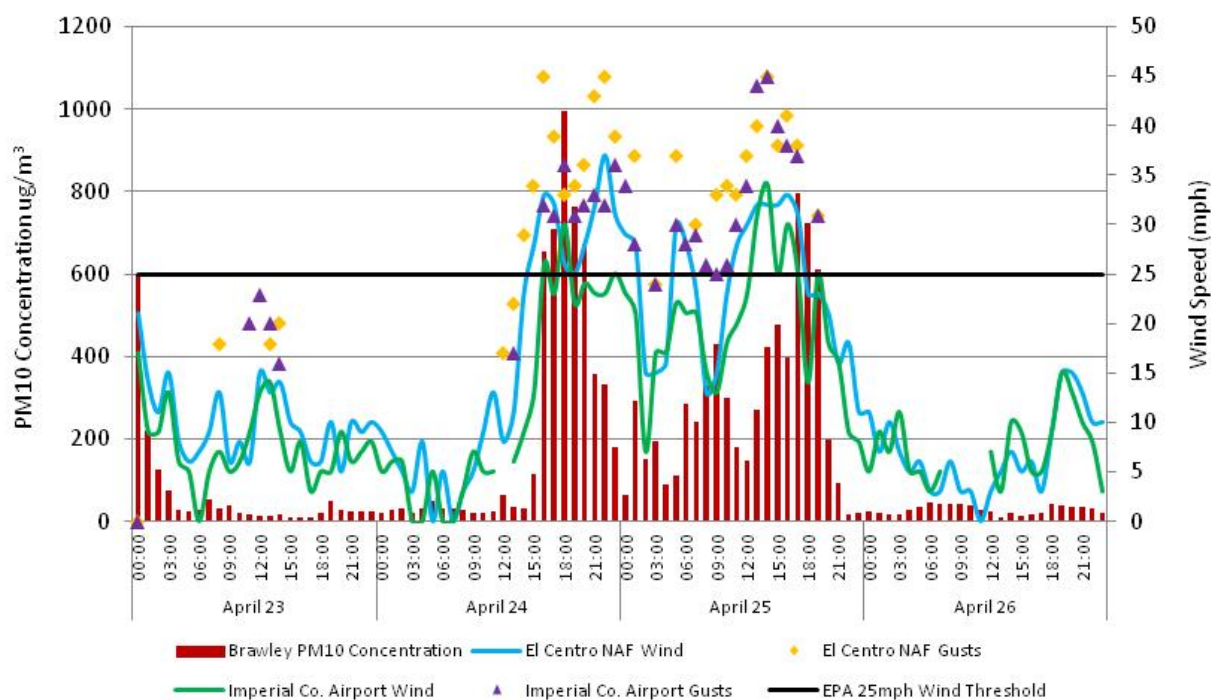


Fig C-1: Fluctuations in hourly concentrations over 72 hours show a positive correlation with wind speeds, and particularly gusts, at Imperial County Airport (KIPL) and El Centro NAF (KNJKL). Brawley station does not measure wind. Air quality data from the EPA's AQS data bank. Wind data from the NCEI's QCLCD system

¹ National Weather Service; NOAA's Glossary – Wind Speed: The rate at which air is moving horizontally past a given point. It may be a 2-minute average speed (reported as wind speed) or an instantaneous speed (reported as a peak wind speed, wind gust, or squall); <http://w1.weather.gov/glossary/index.php?letter=w>

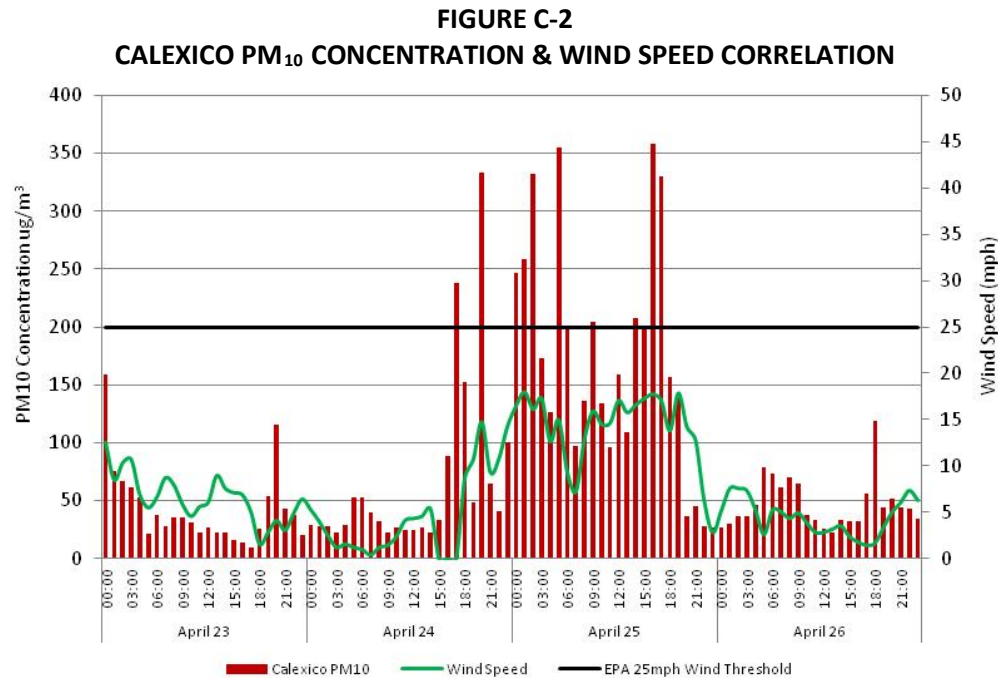


Fig C-2: Winds at Calexico did not reach the 25 mph threshold. However, the lesser wind speeds allowed for dust to be deposited on the monitor, causing an exceedance on April 25, 2016. Air quality and wind data from the EPA's AQS data bank

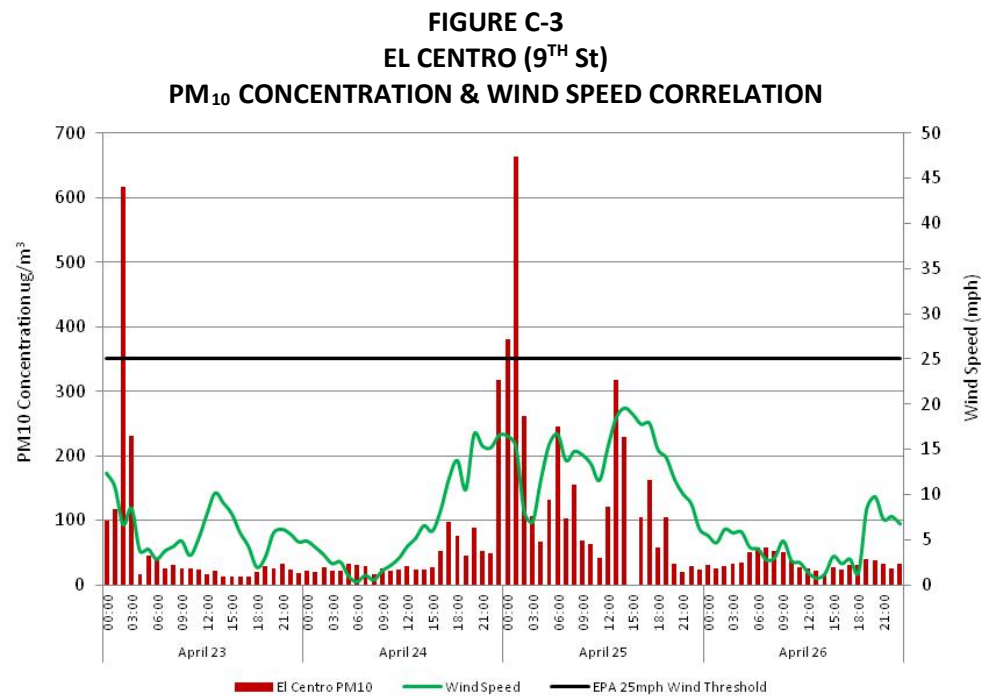


Fig C-3: Concentrations at El Centro (9th St) did rise in response to an uptick in winds during April 24, 2016 and April 25, 2016, but the station did not exceed, although by a narrow margin. Air quality and wind data from the EPA's AQS data bank

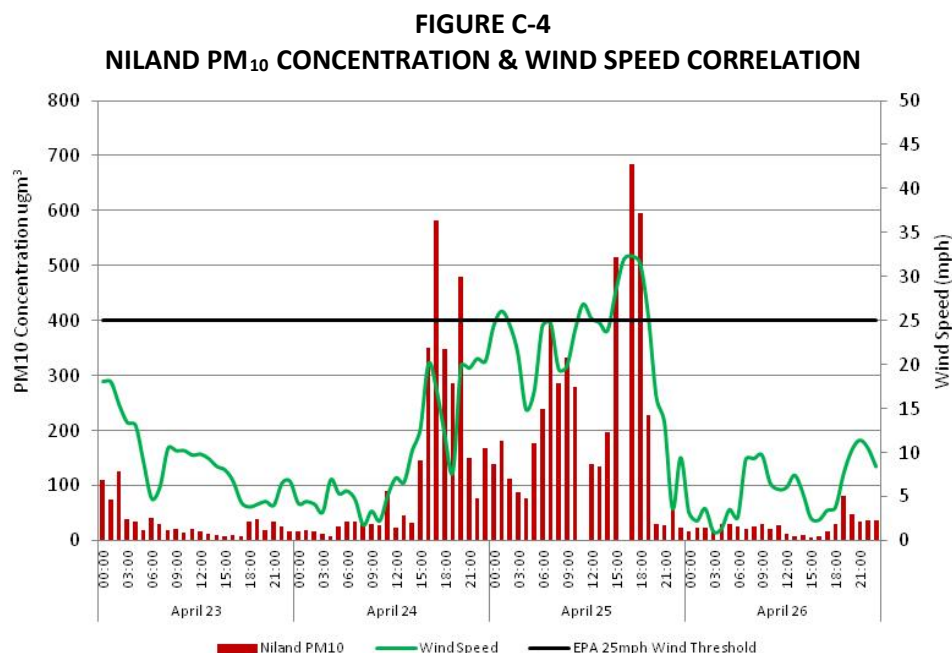


Fig C-4: Winds at Niland surpassed the 25 mph threshold. Concentrations rose in response to dust being transported downstream to the monitor, resulting in an exceedance on April 25, 2016. Air quality and wind data from the EPA's AQS data bank

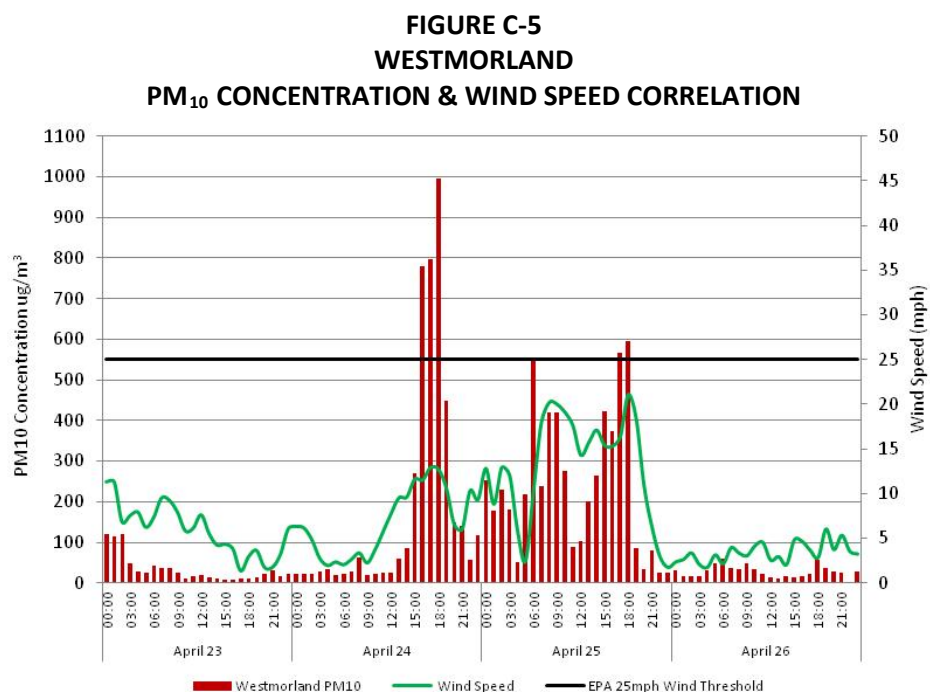


Fig C-5: Although winds did not surpass 25 mph at Westmorland station, higher winds upstream transported dust downstream, where lower wind speeds at the station allowed dust to be deposited. Air quality and wind data from the EPA's AQS data bank

EASTERN RIVERSIDE COUNTY SITES

FIGURE C-6
TORRES-MARTINEZ DESERT CAHUILLA INDIANS RESERVATION
PM₁₀ CONCENTRATION & WIND SPEED CORRELATION

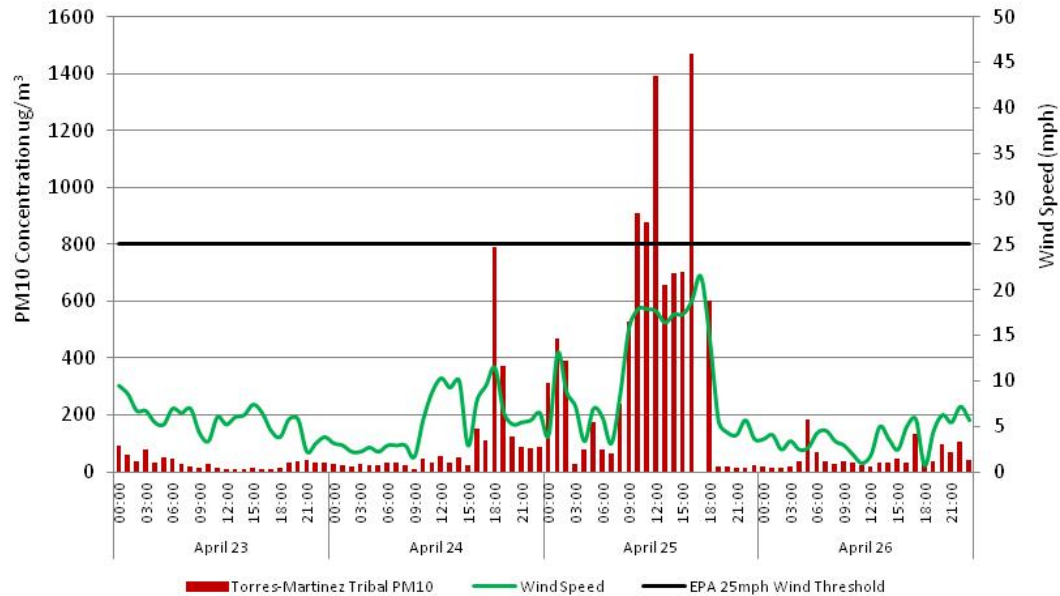


Fig C-6: Concentrations rose in response to higher winds on April 24, 2016 and April 25, 2016. Air quality and wind data from the EPA's AQS data bank

FIGURE C-7
INDIO (JACKSON ST)
PM₁₀ CONCENTRATION & WIND SPEED CORRELATION

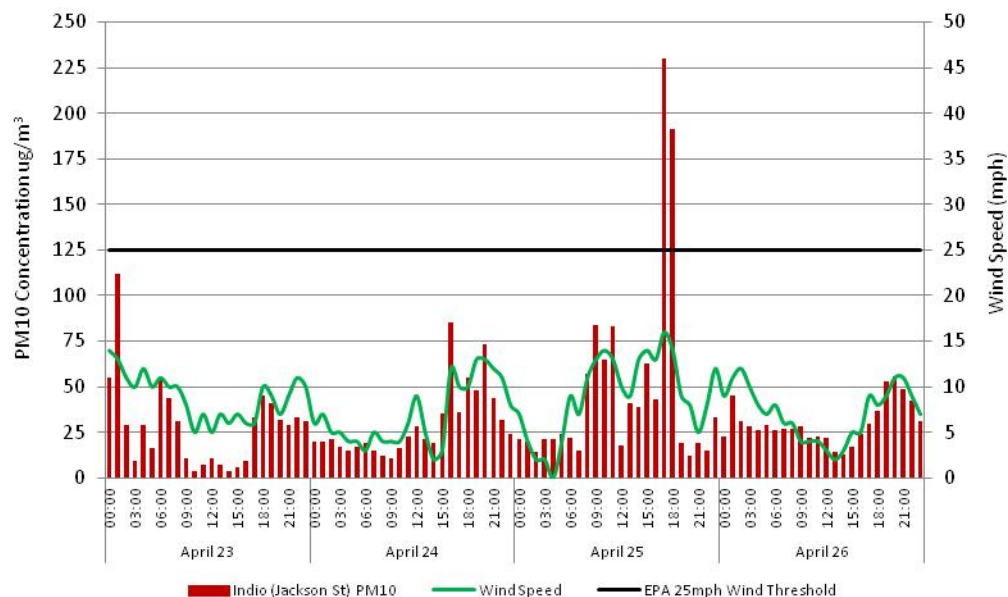
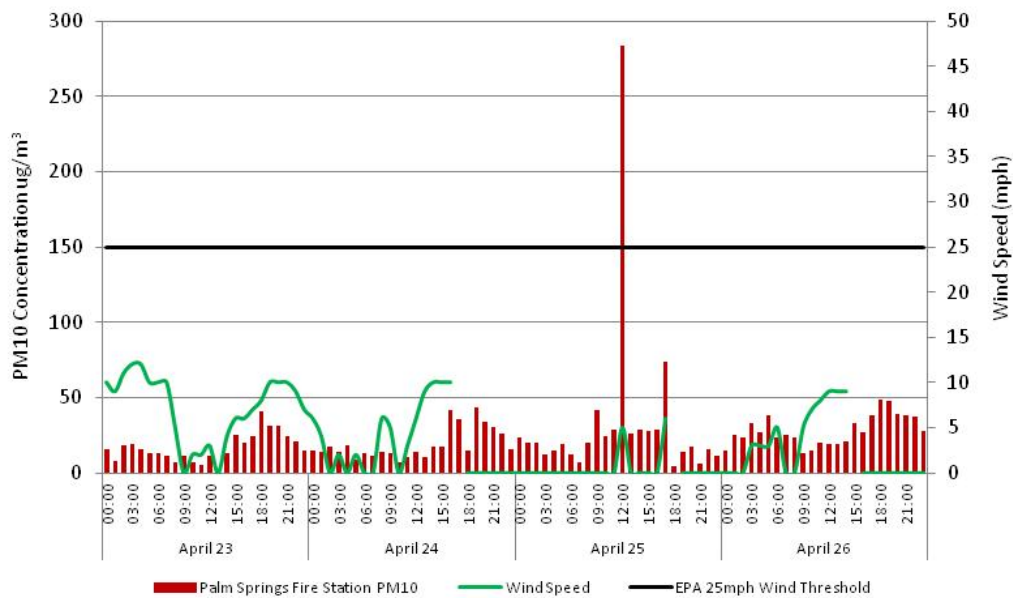


Fig C-7: Concentrations rose in response to higher winds on April 24, 2016 and April 25, 2016. Air quality and wind data from the EPA's AQS data bank

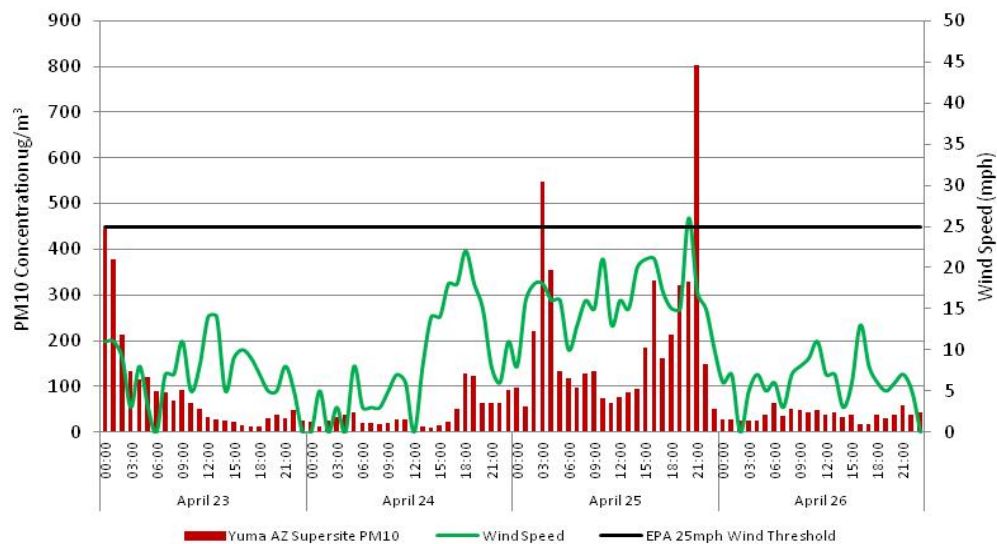
FIGURE C-8
PALM SPRINGS FIRE STATION
PM₁₀ CONCENTRATION & WIND SPEED CORRELATION



Figs C-8: Concentrations rose in response to higher winds on April 24, 2016 and April 25, 2016. Air quality and wind data from the EPA's AQS data bank

SOUTHWESTERN ARIZONA

FIGURE C-9
YUMA, ARIZONA SUPERSITE
PM₁₀ CONCENTRATION & WIND SPEED CORRELATION



Figs C-9: Yuma Supersite in Yuma, Arizona, located downstream in the southwestern portion of Arizona, saw corresponding increases in particulate matter as wind speed increased during the April 24, 2016 and April 25, 2016. Wind data from the NCEI's QCLCD system